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XXI. *A Letter from Mr. Henry Baker, F. R. S. to the President, concerning an extraordinary large fossil Tooth of an Elephant.*

S I R,

Read March 28. 1745.

THE fossil Tooth I have now the Honour to lay before you, was sent me lately, from *Norwich*, by *Mr. William Arderon*. It seems to be a Grinder belonging to the Left Under-Jaw of a very large Elephant, as its own Size and Weight may shew : For the Circumference, measured by a String drawn round the Edge, is 3 Feet, wanting 1 Inch; in Length it measures 15 Inches; in Breadth, where widest, 7 Inches, in Thickness above 3 ; and its Weight is upwards of 11 Pounds.

On one Side it is convex, and on the other concave, with 16 Ridges and Furrows running on each Side transversely, and corresponding with the same Number of Eminencies on the grinding Edge, which appears furrowed like a Millstone. On the Bottom of the Part that lay within the Gum are several Cavities for the Insertion of the Nerves. The whole Tooth is almost intire, and seems very little, if at all, petrified; but, since its being exposed to the Air, several little Cracks appear. Other monstrous Bones were found with it, as I am informed; and particularly Thigh Bones, 6 Feet long, and as thick as the Thigh of a Man; all which belonged probably to the same Animal, and may be considered as farther Proofs of the Creature's enormous Size.

The

The Place where, and the Manner how, these Bones were discovered, are Particulars so well deserving Consideration, that I shall make no Apology for relating them.

A little Town, called *Munsley*, is situated close to the Sea-shore, on the North-east Coast of the County of *Norfolk*, where the Sea is bounded by exceeding high rocky Cliffs: Some whereof being gradually undermined by the continual Dashing of the Waves when the Tide comes in, great Pieces frequently tumble down upon the Shore: And by the tumbling down of one of these the above mentioned Bones and Grinder were discovered.

Here therefore can be little Reason for imagining (as I know some have done, when such-like Bones have been found in more inland Counties), that the *Romans* brought Elephants over hither; which, when dead, they buried deep in the Earth, to prevent their becoming offensive: For they could never think of burying such a Carcase in a rocky Cliff, close to, or perhaps over-hanging, the Sea. — But, on the contrary, this Discovery seems a convincing Demonstration, that the Earth has undergone some very extraordinary Alterations: For the Remains of Animals, of quite different Climates and Regions, and of Kinds, which, in the present Situation of the World, could never possibly come over hither, must either imply their having been placed here by Providence, originally, or, that this Island must, heretofore, have been contiguous to the Continent: But, since we find these Creatures in very hot Countries only, it is highly probable they were never placed here by Providence; unless we can suppose the Temperature
of

of our Climate, as to Heat and Cold, to have been greatly alter'd: And, without such a Supposition, it would be no less unreasonable to imagine they would wander hither from warmer Regions, though even all the Quarters of the Globe should have been contiguous.

What Changes have happened to our Earth, and how they have been produced, no human Wisdom can possibly find out with any Certainty: But suppose only the Polar Points, or *Axis* thereof, to have been shifted at any time but a few Degrees, and its Centre of Gravity to have been alter'd (which some great Men have imagined not improbable), what Convulsions in Nature, what an universal Change in the Face of Things, must thereby have been occasioned! What Inundations, or Deluges of Water, bearing every thing before them! What Breaches in the Earth, what Hurricanes and Tempests, must have attended such an Event! For the Waters must have been roll'd along, till, by them, an Equipoise was produced. — In short, all Parts of the World would thereby acquire different Degrees of Heat and Cold than what they had before. Seas would be formed where Continents had been: Continents would be torn in sunder, or perhaps split into Islands. The antient Bed of the Sea would be changed into dry Land, and appear covered at first with Shells, and other marine Bodies; of which the Action and nitrous Salts of the Air would, in a few Years, moulder away and turn to Dust those upon the Surface; but such as were buried deep would be preserved and remain for many Ages.

Such would probably have been the Fate of inanimate Things: And as to living Creatures, they must have

have been almost universally destroyed and buried in the Ruins of the World, as perhaps this Elephant may have been. Some few, however, would in all likelihood escape, either by swimming to, or being left on, rising Lands; where, if they met with proper Food, and an agreeable Climate, they would continue and increase, or otherwise would wander till they found such a Country, unless prevented by interposing Seas, or impassable Rivers.

All this indeed is barely Conjecture: But the Bones and Teeth of Fishes, the Multitudes of Sea-Shells (some whereof are petrefied, and others not), and the many Sea-Productions found buried in the Earth in almost every Country, at vast Distances from the Sea, and even in the midland Parts, are Demonstrations of the surprising Alterations that must have happened as to the Disposition of Sea and Land. The Horns of the great Mouse-Deer, dug frequently out of the Bogs in *Ireland*, and sometimes in *England*, the Bones and Teeth of Elephants found there, and this present Discovery, together with some others of the like Kind that have been made in *England*, seem to prove, that such Animals formerly inhabited these Countries, notwithstanding the Mouse-Deer is known at present only in *America*, and Elephants are not found except in *Africa* and *Asia*.

Part of the Horn and Palm of a Deer, found in a Chalk-Pit, at a Village called *Baber*, 4 Miles East of *Norwich*, at the Depth of 16 Feet, and almost converted into a chalky Substance, being of a Kind of which, I am told, we have none in this Island, I also lay before you, as another Proof to the same Purpose.

Hoping

Hoping Pardon for this Digression, I shall just beg Leave to observe, that the present Grinder and Bones, however they came thither, must have lain in this Cliff for many Ages; and that the Grinder in particular is very much larger and heavier than any our late worthy President Sir *Hans Sloane* has mentioned in N°. 403. and 404. of the *Philosophical Transactions*, where he gives an Account of all the fossil Teeth of Elephants that had come to his Knowledge. I may add, that none of those mentioned by Mr. *Molineux*, in his History of *Ireland*, come near it in Weight or Size. Our Thigh-Bones of 6 Feet long exceed also by 2 Feet any I have ever yet heard of: And, according to Mr. *Blair's* Osteology of an Elephant 9 Feet high, which died at *Dundee* in *Scotland*, in the Year 1706, and whose Thigh-Bones were 3 Feet in Length (*Vide Phil. Transf.* N°. 327.), we may suppose, by the Rules of Proportion, that the Elephant, to whom our Bones and Tooth belonged, was 18 Feet in Height.

Permit me, Sir, to assure you, that I am, with the utmost Respect and Sincerity,

Your most obedient humble Servant,

London, March 26.

1745.

H. Baker.

See TAB. I. Fig. 7.

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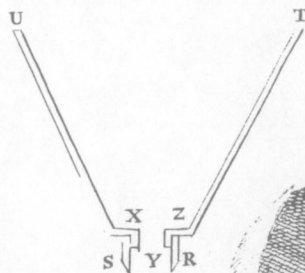
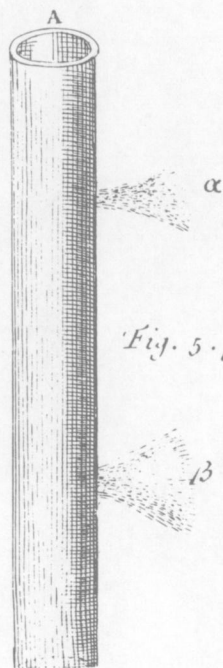
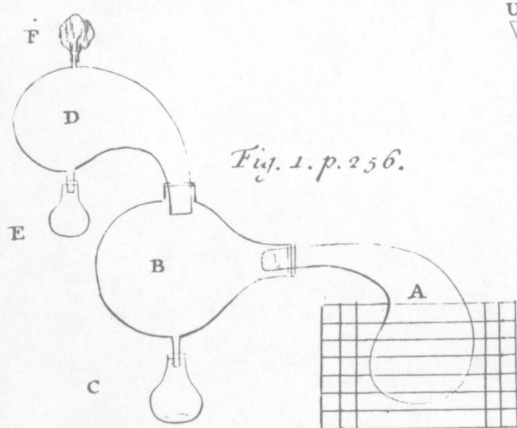


Fig. 8. p. 340.

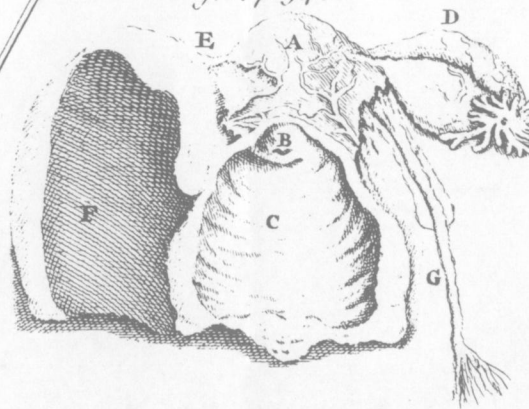


Fig. 2.

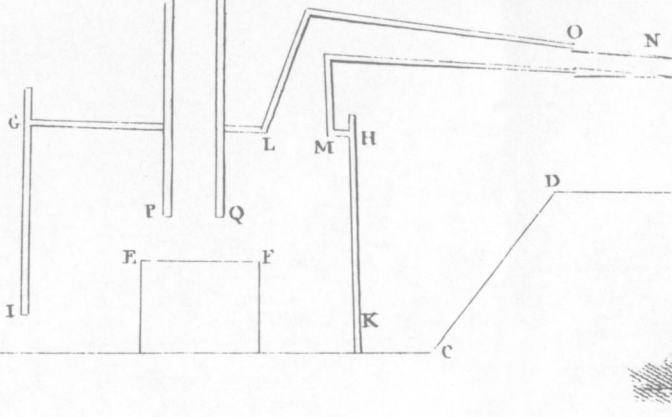


Fig. 3. p. 280.

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Fig. 8. p. 340.

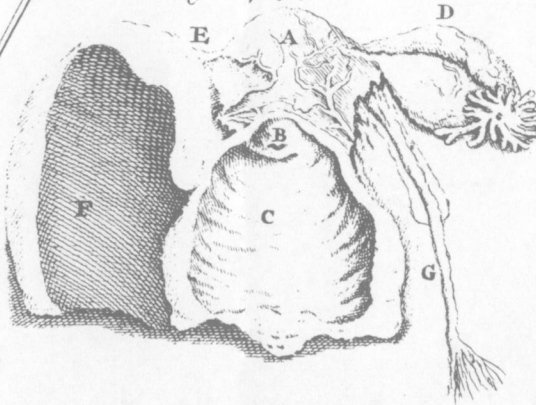


Fig. 4. p. 288.

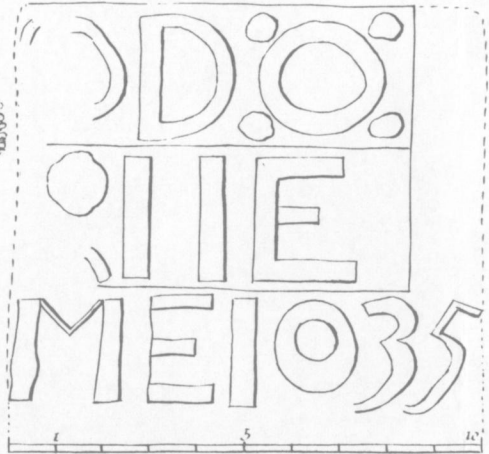


Fig. 2. p. 284.

A Scale of Inches.



A Scale of Feet.

Fig. 7. p. 333.

